

COMBINED DECLARATION AND
POWER OF ATTORNEY FOR PATENT APPLICATION

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below adjacent to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled **METHOD AND APPARATUS FOR DRIVING A PIEZOELECTRIC FUEL INJECTOR ELEMENT**, and the specification of which:

☒ is attached hereto;

☐ was filed as United States Application Serial No. _____ on _____, _____ and was amended by the Preliminary Amendment filed on _____, _____.

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, §1.56(a). I hereby claim foreign priority benefits under Title 35, United States Code § 119 of any foreign application(s) for patent or inventor's certificate or of any PCT international applications(s) designating at least one country other than the United States of America listed below and have also identified below any foreign application(s) for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America filed by me on the same subject matter having a filing date before that of the application(s) of which priority is claimed:

EL5946/141308

**PRIOR FOREIGN/PCT APPLICATION(S)
AND ANY PRIORITY CLAIMS UNDER 35 U.S.C. § 119**

Country : Europe

Application No. : 00 106 988.9

Date of Filing: April 1, 2000

Priority Claimed

Under 35 U.S.C. § 119 : ☒ Yes ☐ No

I hereby claim the benefit under Title 35, United States Code § 120 of any United States Application or PCT International Application designating the United States of America that is/are listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in that/those prior application(s) in the manner provided by the first paragraph of Title 35, United States Code § 112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations § 1.56(a) which occurred between the filing date of the prior application(s) and the national or PCT international filing date of this application:

**PRIOR U.S. APPLICATIONS OR
PCT INTERNATIONAL APPLICATIONS
DESIGNATING THE U.S. FOR BENEFIT UNDER 35 U.S.C. § 120**

U.S. APPLICATIONS

Number :

Filing Date :

**PCT APPLICATIONS
DESIGNATING THE U.S.**

PCT Number :

PCT Filing Date :

I hereby appoint the following attorney(s) and/or agents to prosecute the above-identified application and transact all business in the Patent and Trademark Office connected therewith.

(List name(s) and registration number(s)):

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26646

PATENT TRADEMARK OFFICE

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Full name of inventor Johannes-Jörg Rueger

Inventor's signature _____ Date _____

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[illegible]

Full name of inventor Joerg Reineke

Inventor's signature _____ Date _____

Citizenship Federal Republic of Germany

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70469 Stuttgart
Federal Republic of Germany

Post Office Address Same as above

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% 1. 데이터 불러오기
load('data.mat');
% 변수명 확인
whos;
% 데이터 크기 확인
size(X);
size(Y);
% 데이터 분포 확인
hist(X);
hist(Y);
% 데이터 전처리
X = X - mean(X);
Y = Y - mean(Y);
% 데이터 분할
[training_data, validation_data] = partition(X, 0.8);
[training_label, validation_label] = partition(Y, 0.8);
% 모델 초기화
model = init_model();
% 모델 학습
for epoch = 1:100
    % 학습 단계
    [loss, accuracy] = train_step(model, training_data, training_label);
    % 검증 단계
    [val_loss, val_accuracy] = validate_step(model, validation_data, validation_label);
    % 모델 저장
    save_model(model, 'model_epoch_' + string(epoch) + '.mat');
end
% 모델 평가
[final_loss, final_accuracy] = validate_step(model, validation_data, validation_label);

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